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Interviews with Chiefs of the Soil Conservation Service: Williams, Grant, Davis, and Berg

Edited by Steven E. Phillips and Douglas Helms

Economics and
Social Sciences
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Cover contains photos of the four SCS chiefs interviewed in this volume:

Top left: Donald Williams
Top right: Kenneth Grant
Bottom left: Mel Davis
Bottom right: Norm Berg

Cover designed by Jimmy Todd, SCS

Photos: courtesy of the SCS Office of Public Affairs

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Economics and Social Sciences Division
Soil Conservation Service
United States Department of Agriculture
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Introduction

Here, with varying degrees of candor, is the story of the Soil Conservation Service, told by four men who ran the agency from the Eisenhower to the Reagan administrations, a period of about thirty years. First came the late Donald A. Williams, who had the formidable task of managing the long-term development of the Service after the tenure of its crusading founder, Hugh Hammond Bennett. Next Kenneth E. Grant led the agency as environmental concerns grew and urban or suburban citizens demanded more assistance. Under Mel Davis, the Service attempted to cope with the expansion of land in production agriculture (largely a consequence of large grain sales to the Soviet Union) even as budgetary pressures increased. Finally, Norman A. Berg steered the agency during a time of renewed interest in environmental concerns. He was also the last "career chief," that is, he worked his way up the ranks of the Service to the top position. (Note: the title for the top position in the Service has switched between "chief" and "administrator.")

We edited these interviews with a light hand so as to give the reader a feel for the conversational style of each man. We endeavored to transmit not only what they said but also how they said it.

Several themes tie their tenures together. From its initial emphasis on soil conservation on agricultural land, the Service has steadily expanded into areas like flood prevention and rural economic development. Each chief sought to accomplish these new tasks while maintaining the agency's traditional role of service to farmers. Perhaps the most contentious issue was, and is, the perceived conflict between economic development and environmental protection. This is clear in disputes over the use of structural measures for flood control, channelization, and agricultural chemicals. Other common issues include the organization of the Service and relations with Congress and the White House.

Readers seeking to learn more about specific issues or programs discussed in these interviews are advised to turn to *Readings in the History of the Soil Conservation Service* (Historical Notes Number 1, 1992) by National Historian Douglas Helms.

We would like to thank Messrs. Williams, Grant, Davis, and Berg. Each graciously gave of their time, both for the interviews and to review the transcripts. Barbara Cook and Sheree Gross of the Economics and Social Sciences Division (ECN) cheerfully helped with the tedious task of transcribing the interview tapes. Nancy Mathews and Anne Henderson of Strategic Planning Division, as well as Jennifer Harr and Leigh Ann Mays of ECN made valuable suggestions for improving the readability of the text. Finally, we greatly appreciate the efforts of Claudette Hayes of the Service's Publication and Printing Branch, who has managed the printing of this and earlier volumes in the Historical Notes series.

Steven Phillips
Historian

Douglas Helms
National Historian

Donald A. Williams

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Part Three: June 14, 1981

Biographical Sketch

Donald A. Williams was born in Clark County, South Dakota, on July 14, 1905. After graduating from Clark County High School in 1923, he attended South Dakota State College of Agriculture & Mechanical Arts and received his degree in engineering in 1928. From 1927 through 1934, Mr. Williams worked as an engineer in Mitchell, Sioux Falls, and Senator, South Dakota; farmed at Clark, South Dakota; and did postgraduate work at his alma mater and at the University of South Dakota.

Following employment with the state highway department at Pierre, South Dakota, he entered duty with the Soil Conservation Service (SCS) on June 3, 1935 as superintendent of the Civilian Conservation Corps camp at Presho, South Dakota. He served as an engineer on SCS projects at Great Falls, Montana, Emmett, Idaho, and Dayton, Washington from November 1935 to June 1939. Mr. Williams then served as the area office engineer at Spokane, Washington, until moving to the Northwest Regional Office at Portland, Oregon as assistant regional director in September 1941. In March 1950 he became the flood control survey officer in the Office of the Secretary of Agriculture in Washington, DC. His appointment as assistant chief of the Service in charge of operations came in July 1951. Beginning in March 1953, Williams was administrator of the Agricultural Conservation Program Service until the Secretary of Agriculture appointed him administrator of the Soil Conservation Service on November 27, 1953. Williams remained as administrator until retiring from the government on January 11, 1969.

Mr. Williams has served as a consultant on soil and water conservation to the governments of India, Turkey, New Zealand, and Thailand. Additionally, he made four trips to India for the Ford Foundation in 1967-68, 1971, and 1973. Mr. Williams resided in New Delhi from April 1969 to April 1971 while serving as an advisor to India's Soil and Water Conservation Board for the Ford Foundation. This consulting work dealt with soil and water conservation--especially programming, organization, administration, and technical expertise. Professionally, Mr. Williams is best known for his contributions to conservation irrigation and integrating water management into the concept of soil and water conservation. Awards have included an honorary doctorate from South Dakota State College (1956), the Distinguished Service Award of the Department of Agriculture (1958), the Rockefeller Public Service Award for Public Administration from Princeton University (1967), the Hugh Hammond Bennett Award from the Soil Conservation Society of America (1967), and the Distinguished Engineer Award from South Dakota State University (1977). Mr. Williams

was selected as a fellow and life member of the Soil Conservation Society of America and of the American Society of Civil Engineers, and a fellow of the American Association for the Advancement of Science. The Soil Conservation Society of America established a fellowship in conservation in his name in 1969. Donald Williams passed away in November of 1982.

Part One: May 26, 1981

Interviewed by Douglas Helms, National Historian, Soil Conservation Service, in Alexandria, Virginia.

HELMS: Mr. Williams, could you tell us about farming practices during your early years in South Dakota that were beneficial or detrimental to soil conservation?

WILLIAMS: Yes, Doug, I'm going to refer back to the time of my boyhood, growing up on the farm of my dad and brothers in the glaciated section of eastern South Dakota. It was the only part of South Dakota I knew until I got through college. What I say will be largely confined to a geographic area with a certain kind of problem. The farming practices at that time were breaking the prairie sod and grazing for horses and cattle, because at that time all farming was by horses. Later they gradually put the soil into cultivation by horse-drawn machinery. This was pothole country. We did not drain potholes in spite of the fact that we would mire the horses and the machinery down in them every time we had a rain. My dad would never drain them. My father was an exception among farmers in our community in that he had had some agricultural education. He had attended Guelph Agriculture College in Ontario, Canada. He took all the agriculture they had in two winter terms back in the 1880s. He was considered an expert and he was an expert compared to the average farmer, both in the care of livestock and his knowledge about legumes and use of organic matter. But from a conservation standpoint he did not have the concept of contour cultivation and soil surface protection. I would say this: Instead of doing like many of his neighbors did, burning their stubble land and burning their straw stacks, he saved his stubble through the winter to catch snow and hold it on the ground. He took his animal waste and spread it on the land. He put the organic matter back in the soil. I would say that you had a mixture here of his type of approach. During the early 1900s, on his own farm, he cooperated with Dr. N. E. Hanson, the chief horticulturist of South Dakota State University, who had introduced alfalfa and clovers from Siberia and Russia and thereby helped to develop legumes and crops adaptable to our South Dakota area. My dad became the first foreman of the South Dakota State University farm, 1893-1899, because he did know something about agriculture and knew how to supervise boys in operating a farm. So there, limited to a certain type of geographic area, is my earliest recollection. I did not get out of the state of South Dakota until I was old enough to go to work. So when I started with the Service, I had it all to learn ahead of me as far as conservation was concerned. The pamphlets I got from South Carolina and so forth did not apply very much to the part of the country where I lived.

HELMS: What led you to a career in soil and water conservation and how were you recruited by the Soil Conservation Service? I guess that would include your education too.

WILLIAMS: When I got out of college--I graduated in civil engineering--I was employed by a private engineer to do consulting work in South Dakota, or to help him to do it--putting in curb and gutter, putting in sewage disposal plants in small towns and cities, water supply, this sort of thing. Then I worked for my brother who was an engineer also doing contract work for the South Dakota Highway Department. I worked on highway locations, bridge design and highway construction. It was in early 1935, while I was on a bridge design job in Pierre, South Dakota, that I got a call from a former classmate at Huron, South Dakota, which was then the South Dakota headquarters of the Soil Erosion Service. He wanted to know if I would be a camp superintendent in a CCC (Civilian Conservation Corps) Camp at Presho, South Dakota. I said, "What kind of an animal is that and what is a CCC Camp?" After getting an explanation on the phone I said, "I think I might be interested in looking into it further." They said, "We want you to go to work in about another week or two." At that time we could put all of our belongings--my wife and I, we had no family then--in the back end of our old Chevy and we could go any old place. We did not have to get a mover. The first we knew I had accepted the job of camp superintendent at Presho, South Dakota, and I found out for the first time what a CCC camp was when I arrived there on May 31, 1935. The previous year, the camp, a tent camp, had been under the jurisdiction of the U.S. Forest Service. It was one of the camps that was transferred from Forest Service jurisdiction to SCS administration. There was not a tree within hundreds of miles, or not until you got to the Black Hills. That is the reason the Forest Service did not want it. But, they had started a project that I was stuck with. They started to build two dams on school lands, the school sections of the Midwest. I could never find out and I never did find out as long as I was building the dams just why they were being built, except that they would catch some water. They were not for irrigation. They were not needed for stock water. They were too big. One dam that we were to build the year that I was there as camp superintendent, was over 100,000 cubic yards. We had one beat-up truck and some wheelbarrows and some shovels to do the job.

As far as learning about conservation was concerned, I was strictly in an engineering sort of a setting. I did not learn anything about range management or about cropland conservation until I moved from there in October of 1935 to Great Falls, Montana. This was one of the first demonstration projects established by the Service. It was in a wind erosion area north of Great Falls. So my

knowledge and my acquaintance with the broad aspects and purposes of soil and water conservation was very limited while I was a CCC camp superintendent.

HELMS: From your observation, where did the Civilian Conservation Corps succeed the most: unemployment relief, protection of resources, or the social good of the enrollees?

WILLIAMS: From my own observation, from the camps that I knew then and for the next few years, they were mostly for unemployment relief. I think, secondly, I would put the social good of the boys. I think they did some real good on that score, especially where the foreman and educational advisors had been carefully selected and where the camps were well operated by the U.S. Army. Protection of resources for the first camps that I was acquainted with was an almost insignificant matter. If these camps had been in the forest or in areas where there were active gullying problems and check dams to be built, the concept and approach would have been different. In other words, it depended on the location of these camps. At the five hundred that were under SCS--SES (Soil Conservation Service--Soil Erosion Service) at the time, there were either conservation problems on cultivated land or rangeland or forest land where certain practices could be applied and were applied. Before my career as a field engineer was over with, I was looking after that kind of work at a number of the CCC camps, particularly in the Pacific Northwest. We had WPA (Works Progress Administration) labor to look after and it was forced upon us. I was just suddenly told that I had two hundred men out of Great Falls, for example, that I had to supervise. During the drought period of the 1930s in eastern Montana I was told that we had to put fifteen hundred men to work with their teams and we had to get scrapers and so forth and put them to work building dams. It was a make-work proposition, but we did get it conservation oriented in so far as water opportunities were concerned.

My knowledge of conservation was, at that time, pretty much limited to engineering. It was not until later that some of these things became more evident. In the early days of the CCC camps and WPA labor we did some of the things we later were ashamed of. Temporary check dams built of wire and straw were put in gullies that would wash out when the first big rain came along. Well, we did not have any money and we could not get any from the cooperating farmers because they were just letting us on their land by the grace of God to put the boys to work. It was not their program; it was a government program. Sure they agreed to maintain it, but then whenever a dam washed out, they would call the government to come and fix it. I would say that the large amount of gully control work that was endeavored to be done with engineering types of structures was one of the

biggest flops of the early days. There were things done that were not right in terms of not paying enough attention to water conservation. It became evident to me when I began to really find out about conservation objectives and purposes that you could not do soil conservation work unless you also did water control or water conservation work in connection with it, unless you were just in a wind erosion area where the wind was the factor.

My interest in conservation largely developed on the water side of the soil and water conservation program. My goal was not to make engineering the dominant factor but to make it subordinate to the things that needed to be done to the soil itself. In other words, we had to get more tilth, more absorptive capacity, into the soil. We had to shorten the slopes so as to give the water a chance to infiltrate. We had to get the obstructions across the slope through contour operations to induce the water into the soil and to keep it from running off. That is how you reduce erosion at the same time you conserve water. Now, with farmers in some parts of the country--low rainfall areas--this matter of conserving an extra inch or two of water when it comes was highly important. That was true in the Great Plains country, whereas in the southeastern part of the United States water was an evil devil. It came too hard and too much and they wanted to get rid of it. Terracing and things like that were started in the early days in the Southeast region just as a matter of trying to get rid of the water. Later they found out in the Southeast they needed to conserve it too. But in the beginning that is the way it was. In the beginning days there was practically no attention paid to the irrigated land. People thought that if the farmers had irrigation, then the problems are all taken care of. But some of the most severe erosion was taking place on irrigated land because of running the water too long on too steep slopes and furrows or not using the right amount of water for the particular soil type or the particular crop. We developed what we called later conservation irrigation practices in which we would control the water with engineering devices or sometimes a diversion so they would not get too much water into a furrow or a basin for the particular crop that was to be grown. We would teach the farmers how often to irrigate different crops in order to get the best results from the efficient use of water. Then we would help them to save the water. They had to use it at the right time. They would get improved water use through how they handled the water on the field. At the same time they were taking care of some of the erosion problems on irrigated land.

Water use, water development and conservation really became my professional strong point. I am not ashamed to say that I was perhaps the pioneer in the development of conservation irrigation practices in the Pacific Northwest which have been spread around the world. This has

formed the basis of my international consulting work in India, Turkey, and New Zealand and various other places on how to manage water through drainage or through application of water to match the soil type, the crop type, and the quantity needed, at the time needed, to bring efficiency into the picture in a safe, productive way. Conservation irrigation practices became a major part of the technical program in the Soil Conservation Service over a period of time. That became the definition of "soil and water conservation" as far as irrigated land is concerned. In non-irrigated land, there are other devices for water conservation, but it was all tied back into this infiltration business. We had to know the soil. As an engineer, I had to know the soil intake capacity. I had to know what cover influence would do, in terms of straw or trash on the surface or growing crops, to infiltration. Coupling these things together we have made engineering a subordinate factor to the job that needed to be done to produce a crop in an efficient way and to save the soil. It was soil conservation supported by water conservation and development. That was the story we carried around the world to New Zealand, to India, to Turkey, to countless countries of almost every continent, which I did for over a period of thirteen years, off and on.

HELMS: When SES began, were operations too structure-oriented in terms of getting conservation?

WILLIAMS: Yes, that was the early emphasis during the CCC camp period. When we had all this labor to take care of from WPA during the relief labor days, we were forced into an engineering type program. "Build something that will use labor." I used to take WPA labor and clean the silt out from under a farmer's fences. That was not building anything because it would blow right back in again, but that was all we had for them to do. Then we would be laughed at for using WPA labor for that kind of stuff, you see. But what else was there to do with it? Here they were ready to go to work. We wanted to get rid of that labor. The labor part was running the program too much. We wanted to reduce that labor input and make that the farmer's job. If he was not interested enough to do the necessary work to install the practices that fitted his place, he was not going to use them anyway. We wanted to get rid of those camps. We were very happy when the WPA labor was over with, I can tell you that.

HELMS: You came to this realization fairly quickly after you started?

WILLIAMS: Very quickly, yes. After about the first week.

HELMS: I guess you have sort of answered the next question I had planned. You got to see the shift from

the demonstration area projects to the conservation district approach. How did you view that?

WILLIAMS: I want to say something about that, Doug. I was in on the very earliest days of that, of course, because the Standard Soil Conservation Districts Act came in 1937. I was in the Pacific Northwest living at Spokane, Washington. I was serving as an area engineer when the first soil conservation district came into the picture in the state of Washington and I was present at the hearing and in the organizational process. I worked closely with those farmers who became the district supervisors. Then I watched the district movement grow from 1937 until I retired in 1969, until it had covered practically every square mile of the United States with the exception of some urban areas and some of the public lands. I could not believe any more strongly than I do in the concept of conservation districts as against demonstration projects. The fundamental reason is that in a demonstration project, we actually went out there with labor, with materials, with seed, with trees, and did a job on a farm to show that it could be done. Whereas in a district, we went out there only with a soils map and with some technical guidance and advice on what to do with this kind of a problem and the farmer either bought it or he did not. Usually he would say, "I will try some of that on a part of the farm. If it works on a part of it, I will do it on the whole farm." Some of these farm conservation plans evolved way back there in the late 1930s. I would say the ones we had on the demonstration farms were not real conservation plans. They were government plans. But the soil conservation plans which were the farmers' plans, with technical guidance from SCS, tied in his problem, his capability, his resources along with his community interest, marketing opportunities, and so forth with what his capabilities were. He knew what power he had, horses or tractors. He knew what his financial resources were. He knew whether he could plant clover and alfalfa and use a part of the land for growing legume crops while the rest of it was growing grain crops. He had to make those decisions.

I did quite a lot of conservation planning as an adjunct to my engineering work. Usually we found that we could get a farmer to try out what we were suggesting on a part of his farm. If it did not work, why then we would not insist that he do it all. But if it worked and it proved advantageous, we would help him lay out the rest of it. I have some very great friends among the soil conservation district supervisors who I personally worked with in helping them come along. The organized effort of the soil conservation districts of the farmers working together, which is their project, not a government project, was sound. It is still working. I would say this out of my experience, in looking over the

entire field, somewhere between 10 or 15 percent of the total number of soil conservation districts, which is now some twenty-nine hundred or something, were outstanding in their leadership and their capability and their pulling people in. We had about the same number on the other end of the totem pole. They were kind of dead on their feet. It was partly the fault of the Service in generating leadership and it was partly the fault of the local people in electing people who did not want to work as a supervisor in the first place.

HELMS: Can you tie that to a region of the country as to which were more energetic or is there no pattern to it? Can you have one conservation district here with good leadership and then one next to it without it?

WILLIAMS: There is a real reason for it in my opinion--the background of education. In the early years that came almost exclusively from the Soil Conservation Service until such time when the Extension Service got more and more interested in the act and helpful. The background was selling conservation to the group before they organized the district. When they saw what was to be done, they wanted the capability or leadership to do it. In that kind of a setting, if a man or a woman agreed to be a district supervisor, he knew what he was taking on. But if he thought that he was just getting pushed into having to go to meetings once a month and sign a bunch of papers and maybe do some work trying to talk somebody into something, he would be a weak supervisor. A lot of the responsibility came back to the Service and how good an educational job it did. But it also hinged to a large extent on what we used to call finding the right "Elmer," finding the right local leader to work with. If you got the right local leader to work with in terms of getting him interested, he could get it out in the community.

If there had been soil conservation districts when I was a boy and my dad was busy in farming, he would have been a local leader because he was a fellow who was on the school board. He was on the township board. He was on this and on that. He did more work for his community than he did for himself. That is why we never got rich. But, he liked to work with people. He liked to work with boys. That is why he went to South Dakota State University and helped them establish an agricultural education program at South Dakota State.

HELMS: If you do not have a strong conservation district board, then the Soil Conservation Service conservationist in that area pretty much has to take it on himself to find the cooperators, doesn't he?

WILLIAMS: Unless you have got a strong board, it becomes an SCS project just like the old demonstration projects. There is too much similarity to the old demonstration projects.

Then it depends upon the capability and the energy and the drive of the local conservationists.

The local soil conservation technician took on a responsibility that should have been the responsibility of the district supervisors of pushing the program and getting people interested in it and trying to do the whole thing. We soon found out that some of them were very adept at it and some were not. We knew that in every case, even with the best leadership of farmers, we had to have good conservationists out there to even keep up with the parade, to keep current, and to keep ahead of them. This necessitated that the Service set up in the very early days a training program for its field people. Not just training in how to seed or how to plant trees or how to irrigate or how to do the technical things which were also needed, but in how to work with people, how to give leadership, how to develop their interest in conservation. You know you go out and ask a man, "You are not interested in conservation, are you?" He will tell you, "No." But if you go at it the other way, he will say, "Yes." So we had to teach them how to get the answer to be "Yes." When we give further consideration to training, this was the reason why, in the early days, the Service recognized that we had to have a good strong training program within the Service to keep current and to work with other people.

HELMS: During World War II, did attempts to increase food supply cause setbacks in taking submarginal land out of production, specifically in the area where you happen to have been located at the time?

WILLIAMS: Yes. I remember very distinctly some of the things that transpired during World War II. The government encouraged--properly so, in the national interest--that all land that was suitable be put under cultivation. The farmers, many without proper knowledge or proper guidance, plowed up land that should never have been plowed because it was not suitable for crop production. It was too shallow, too sandy, or too droughty to go into cultivation. Millions of acres of it were out in the high plains country or breadbasket country of the United States, the wheat basket. There was an awful lot, some fourteen or fifteen million acres of land, that should have never been plowed out of grass that was plowed and put into wheat. Fortunately for the farmers they had a year or two of pretty good rain and they produced a crop. Then the drought hit and the wind started. We got into the hazards of wind erosion again in spite of the early wind erosion control programs that had been carried out.

HELMS: During your time as assistant regional director in the Pacific region, what conservation problems did the Service attack successfully? On the other hand, what

problems persisted either because of physical conditions or landowners' practices?

WILLIAMS: I could write a book on that one, but I will not. I will try to keep it as brief as possible. In the Pacific Northwest, the entire Pacific Coast area actually, we had had one of the most outstanding plant materials specialists that the Service ever had, a man by the name of Dr. A. L. Hafenrichter, an agronomist with tremendous experience in breeding plants for conservation objectives, and special grasses and legumes to fit different climatic and soil situations. I think that the greatest contribution to conservation and perhaps to agricultural production came about through the plant materials. Call it research if you want to. But it was applied research--developing these plants on Service areas and then getting the seed out to farmers to try. It gradually brought into the picture changes in the types of legumes and grasses that were being used throughout the western states. We did not get into such things as breeding wheat varieties or crop varieties. That was the job of the research service (Agricultural Research Service) or the state experiment stations. But we did get into the job of developing conservation plant materials. This was one of the strongest things that was done.

The second most important thing, because of the need in the West for irrigation for the generally low rainfall areas and non-irrigated sections, was water conservation. This was why, as an engineer, the challenge of uncontrolled water, either too much of it from flooding, from storms, or too much irrigation water, or lack of controls, or the improper use of the irrigation water became such a challenge to me. I found early in the game that it was possible--by knowing the kind of soil you had, the texture and depth of the soil, the rooting characteristics of the plants that you wanted to grow, and something about their water requirements by growth intervals--to find out how much water to apply to the land to irrigate a particular crop and how often to apply it to keep the moisture in the root zone. In order to do that, we had to have controlled outlets from the irrigation canals. We had to get the Bureau of Reclamation to put some controlled outlets in the canals so that the water could be moved out to the farm laterals. We then had to get controls on the farm laterals so that the water could actually be applied to the particular crop when it was needed. I would say that, as a broad category, conservation irrigation or conservation water management, some of which involved drainage to keep land from getting alkaline, was the second most important development.

The third most important development in the West involved the tremendous amount of rangelands, grasslands, both private and public. The Service, except in the early days, did not have much to do with public lands except

through its technical influence. On the private lands we had information from our plant materials work on what it took to grow grasses and legumes and the kind of grazing practices. We developed some very simple, practical approaches that farmers and ranchers could understand. In other words, the principle of "take half and leave half." You let the cattle graze half the climax grasses in the pasture and then move them. Do not let them graze it down to the ground. We looked at the way the grasses would come back and then perpetuate themselves as opposed to counting the number of cattle put on a piece of ground. This was probably the next most important thing.

The fourth most important aspect was on the dry land cropland where we converted from the moldboard and disk plows to the subsurface cultivation which would leave the crop residue on the surface to protect against wind erosion and against the impact of water drops and running water.

The next most important thing, I think, was the introduction into the areas that had long slopes of contour strip cropping to shorten the length of the slopes, without terraces or diversion ditches associated with them. In the Palouse country, which is still one of the major conservation problem areas of the United States, if not of the world, we had a situation in which the very, very deep loessial soils, windblown soils, were fertile even after the top was gone. Farmers did not worry so much if they lost some soil. But the slopes were so steep and the rainfall was usually adequate so that very seldom if ever was there a complete crop failure due to drought. Many of those lands were too steep to be cultivated, but practically all were plowed up and cultivated. Our big battle there was to try to get some of these steepest, most vulnerable lands taken out of cultivation and put into grass. The farmers of the Palouse did not grow livestock. They liked to go to California, Florida and Texas in the winter. They just grew wheat. They did not have any use for grass. They depended on wheat because there is no use producing something on land unless there is a use for it, whether it is trees, grass, or wheat. On the Palouse area with its extremely steep and rugged topography we tried everything we knew how to try. We developed special strip cropping types of practices. We got the machinery companies to develop special equipment for use in those steep slopes. We got a certain percentage of farmers to really take it seriously and try to do a job. In spite of the fact that they did not have livestock we got quite a lot of them to incorporate clover and other legumes into their cropping systems to get some organic matter and nitrogen matter back into the soil. This was a help, but, unfortunately, there was the profit motive, the economic payoff to do it the way they had been doing it, especially as the bigger equipment and the heavier crawler-type tractor equipment came into the picture as

well as self-leveling combines. They could harvest any steepness of slope. When those things came along it just about knocked the conservation ideas in a cocked hat. As an engineer, I laid out many, many miles of what we called diversion terraces. We built those diversion terraces on a slight gradient around some of the hills on the longer slopes. We built them so high that they could not crawl over them with the machinery, so they had to plow between them on the contour. We got quite a lot of farms done. Particularly in the Walla Walla, the Blue Mountain topography of the states of Washington and of Oregon, we got a lot of those diversion type terraces done. But the Palouse remains to this day one of the great unaccomplished conservation areas in the United States.

HELMS: About what time would you say these setbacks--the larger machinery--affected earlier accomplishments you had made? I understood you to say that you had made some progress with cover crops and then things sort of reverted.

WILLIAMS: During the late forties from about 1945 on. It corresponded fairly well with the soil conservation district movement. And then it came along in the early 1950s. Every time the price of wheat got up high enough they would plow up some of the stuff and get back into wheat again!

HELMS: But you were pretty successful in the rangelands, I take it?

WILLIAMS: I would say we were more successful with the sheep farmers in the range country than the cattle farmers, with the exception of the sandhill country in Nebraska, which is one of the greatest grazing areas of the whole world. In the sandhill country of Nebraska, the soils are too sandy to be cultivated. They blow. That is cattle grazing country. Almost every farmer has taken seriously and profitably the conservation recommendations on the management of that land, the management of the grasses, the kinds of grasses to use for different situations, different exposures and different soils so that our grazing management program in the sandhill Nebraska area has been highly successful. It is not limited to that. An awful lot of the other rangeland had good progress made on it too, but of a lower nature because of the poor soils. Usually it was rangeland because of thin soils, rough topography, too many rocks, or something; otherwise it would have been cultivated. The big problem there was to try to shift from putting so many cattle on a particular piece of land to managing the grass with a proper number of cattle to eat the right amount of grass. This was a shift. The Service was able to sell that concept, but not 100 percent, unfortunately. But it was real progress. It was progress that had exceeded the progress made by the Bureau of Land Management on the

public domain or the U.S. Forest Service on their area. They still used the idea of so many cattle permitted for a certain size area.

HELMS: During your water conservation work in the Pacific Northwest, did the cost of water for irrigation affect the adoption of your recommendations?

WILLIAMS: Not very much. Of course, in California, the cost of irrigation water is comparatively very high, particularly in southern California where they must import their water from Colorado and so forth. They are a lot more careful with it down there than they were up in Idaho where they just diverted it out of the stream and it practically cost them nothing. The cost of water was a factor in that they were inclined to use more than they needed because it was so cheap. Actually there are very few places in the United States or the world for that matter where the cost of water is really the controlling factor. The cost of water is a small part of the total cost of production, even in the highest water cost area. There could be some isolated exceptions to that such as in Israel where they use drip irrigation instead of sprinkler irrigation, or some areas of the country like the Columbia Basin Irrigation project. Incidentally, I had a lot to do with outlining the conservation practices that would be used on that project. Certain areas would not permit any kind of irrigation except the use of sprinklers.

HELMS: Was the development of plant materials for the Pacific Northwest region mostly plants for hillsides and arid areas? What were the main problems they were trying to attack?

WILLIAMS: First, we hoped to develop perennial type plants that would do well in given climatic and soil situations. We wanted them to have a productive value if they were on land that should be used. We also had the problem of land that was so steep that it should not be used even for grazing. We developed plants there that were unpalatable. Both of these things were done: legumes that would add nitrogen to the land and proper rotation of grassed areas. We used to call it a brome grass, a clover combination. It is not always brome grass but some kind of grass. It was developed for the rangeland areas or the land that was to stay in grazing lands that would take a certain amount of abuse and would stand up under rigorous climatic situations, under droughty situations and shallow soil situations, and would still provide enough ground cover to reduce the erosion.

HELMS: Do you have any recollections why the Bankhead-Jones Title III Land Purchase program faltered? This was taking some of the submarginal lands out of production.

WILLIAMS: There were several reasons. In the first place, there were some philosophical differences as to whether the government ought to be owning the land or whether the farmers ought to own it. When the Bankhead-Jones program first bought up the marginal land, they bought quite a little land that was not too marginal. They got some real good land purchased in some places that was suitable for cultivation. Then the drought let up and the farmers were anxious to have some more land. I am thinking now of one area in southeast Idaho around Malad. There was some good soil bought up there. The farmers wanted to grow wheat and the government wanted to grow grass. This was one reason there was a conflict of views between farmers and the government. Of course, the political pressure kind of developed around that. In addition to that the price of wheat after the war and the need for production reached the stage where all land that was reasonably suited for cultivation plus some that was not got transferred back into private ownership. The Service was happy to transfer the rest of the projects to the U.S. Forest Service to manage along with the public domain. The U.S. Forest Service manages the remainder of the Bankhead-Jones Act lands along with the rest of their land management programs.

HELMS: The Soil Conservation Service did not have very much enthusiasm for managing these public lands?

WILLIAMS: It was against the basic philosophy of the Soil Conservation Service for the government to buy land and manage it. We were not in the land management business. We were in the technical assistance--the conservation business. We wanted to see productive use of the land. We wanted to see it in the hands of the farmers if it was suitable. If it was not suitable for private ownership, we wanted to see it in the hands of some agency that knew how to run public lands and the Service was not an expert at that. The influence that I had on it was to get rid of it.

HELMS: Did you have something to do with seeing that?

WILLIAMS: Oh yes, I had something to do with that.

HELMS: Well, we will get to that point later. Why were you selected to come to Washington? Whom in Washington did you impress to be selected to come here to work?

WILLIAMS: The last few years I spent at Portland, Oregon, which was then the regional office for the Pacific Coast, I was assistant regional director. I also had an assignment from the Secretary of Agriculture to represent him on the Columbia Basin Interagency Committee for the entire Columbia Basin. This committee met monthly or more often to pass judgment upon projects of various natures all the way from power development, the Bonneville Power

Administration, to flood control by the Corps of Engineers, work by the Bureau of Reclamation and so forth. Agriculture, to the dismay of some of these other agencies, was pulled into that picture. I had, as a representative of the Secretary on that interagency committee, the same power of my vote as the chief of the engineers had. This kind of irked a few people, because sometimes I would vote the other way. That was one way we were able to get the Bureau of Reclamation to pay some attention to what to do with water after it is in the canal. We used to just ride the dickens out of the Bureau of Reclamation for getting water out there and then forgetting about it in their canals. "Let it go," they said. "Leave it up to the farmers to sink or swim." Many of them sank. We got the Bureau of Reclamation on the projects, which were under their administration and had not been turned over to farmers, to give some further attention to water use on the soil, plants, and the water application. They learned that from the Soil Conservation Service.

Now, why did I come to Washington? When Charlie (Charles F.) Brannan was Secretary of Agriculture, I was his representative on that committee for several months. He wanted to spend a few days in the Pacific Northwest to find out more about what was going on out here in the Columbia Basin Project and find out more about the Northwest. I was selected because of my association with the committee to chauffeur him around for a few days. We did a lot of chauffeuring and a lot of talking and a lot of visiting about concepts. One of the areas that we visited was the Columbia Basin irrigation project, that million acres of land that was irrigated out of the Grand Coulee Dam. It so happened that Hugh Bennett was out there about the same time. He joined me one day as we were out there in the Columbia Basin Project. I was explaining to Brannan and Bennett, "Now in this soil area we have got various sandy windblown soils here. We have to irrigate them with sprinkler irrigation. We have to keep ground cover on them. Over in this area we have got good deep loamy soils that can be used here for any kind of crop with good water control." We got back to the office and Bennett went to the regional director, whose name was Heinie Christ, and asked him who that soils man was who was out with them. He said, "Hell, he's no soils man. He's an engineer!" Bennett, said, "Well, I'll be damned." That developed later to be a very significant matter. Charlie Brannan went back to Washington from that trip. Inside of three or four months, he decided he had a vacancy on his staff. He called me up on the phone and wanted to know if I would come back and join his staff.

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HELMS: Mr. Williams, when we finished last time you were explaining why you were selected to come to Washington. I think we had gotten to a point where Charles Brannan, the Secretary of Agriculture, had called you.

WILLIAMS: Yes, Doug, Secretary Brannan called me sometime after that field trip and wanted to know if I would take a staff position of limited duration in his office in charge of flood control surveys and flood prevention responsibilities at USDA. I respectfully declined his offer because I liked it so much in the Pacific Northwest and liked what I was doing. But he did not want to accept that so he asked me to make a trip to Washington. He wanted to talk to me. I did so and I thought up all the reasons I could why I should not accept it. When I went to his office and sat down, he leaned back in his chair and listened while I talked about half an hour. Then he asked me how my health was and I said, "Pretty good." And he said, "When can you report?" He had already cleared it with Dr. Bennett to release me from the Service. So I was appointed. That appointment was for one year. I went from that appointment back to the Service one year later when A. E. (Amwell) Jones, then chief of operations, resigned because of poor health. Dr. Bennett asked Charlie Brannan to release me to become assistant chief of the Service. That was one year before Chief Bennett retired.

HELMS: What were your duties as the flood control survey officer?

WILLIAMS: This was in the beginning of the activities under the so-called eleven river basin or watershed projects. The first eleven projects were activated by the Service as a result of Congressional action. The surveys had been made many years earlier. They included several basins in the country, some in California, some in Mississippi, and one big one in Iowa. These projects were to be the foundation for updating the surveys. The Soil Conservation Service in cooperation with the Forest Service and the Bureau of Agricultural Economics had prepared updated reports. It was my function, working with those agencies, to review those reports and presumably to get them ready to transmit to the Congress. This extended over quite a period of time. It brought up many controversial matters in view of the fact that the concepts of the earliest surveys were not the concepts that later evolved in terms of getting more attention to retardation of water flow through small reservoirs. It dealt almost exclusively with land treatment which included land treatment practices and reforestation and so on. It was our opinion that the surveys should be expanded to include a broader program. It was my function

to review for the Secretary those reports and to give the blessing to them for their transmittal to Congress.

HELMS: Were you fairly well pleased with the final product of the reports?

WILLIAMS: No. The final products were too bulky, too detailed, and too complicated for ready reading. I suppose very few people ever found out what was inside them, rather than the summary pages. By that time, certain key members of the Congress were sufficiently well acquainted with the objectives of the projects initiated out in the field that there really was not any problem of having them authorized in any event. That process did take place in Congress.

HELMS: Do you recall who in particular in Congress was most interested?

WILLIAMS: That was still while Congressman Clifford Hope was Chairman of the Agriculture Committee on the House side. He was a Republican and always a leader. Bob Poage from Texas was a leader on the other side, and also some of the Oklahoma delegation. They could see more positive results coming from it in the early days. Then there were some lay leaders from Nebraska, the governor's office and so on, who were very helpful at that time in pushing the concepts. And I should mention Congressman Ben (Benton F.) Jensen of Iowa who was a strong supporter.

HELMS: You went back to the Soil Conservation Service. Not long thereafter you were appointed head of the Agricultural Conservation Program?

WILLIAMS: When the change of administrations from the Truman Administration to the Eisenhower Administration took place in 1953, following the 1952 election, Ezra Taft Benson was appointed as Secretary of Agriculture. He proposed in October of 1953 a significant organizational change, a number of them, in the Department of Agriculture. Many of these affected the research activities, but among the ones that affected the Soil Conservation Service was the elimination of the regional offices of the Service. This was very strongly opposed by Dr. Bennett and by lay leaders, soil conservation district supervisors and others around the country. They were afraid that the breakdown of the regional offices would deteriorate the technical competence of the Service. In any event, the announcement was made in early November that the reorganization would go forward. Among other things, the Agricultural Conservation Program split away from the old Production and Marketing Administration and was set up as a separate agency. I was asked to be the acting administrator on a loan basis from the Soil Conservation Service to head up that activity until some full-time regular appointment was made. That loan lasted for nine months. I went back to the Soil Conservation

Service at the time that Dr. (Robert M.) Salter, who had succeeded Dr. Bennett as chief, resigned. This was when the reorganization was announced. Salter resigned and I was asked to take over the Soil Conservation Service the next day.

HELMS: On that same question, who asked you to head up the Agricultural Conservation Program (ACP)?

WILLIAMS: Secretary Benson. I do not remember whether it was he personally or Assistant Secretary James Earl Coke. It was one of the two of them.

HELMS: Was that an attempt to increase cooperation between the SCS and the ACP and link those closer?

WILLIAMS: I do not know that that was a primary motive. It might have been an incidental motive. I think they were more inclined to try to see if there could be a stronger, more valid cost sharing activity with the money going toward more enduring conservation practices than had been the historical case. The historical case had been that so much money had gone for temporary practices like fertilization, lime and so forth. It was the desire of the Benson administration to see the money go into more permanent, enduring things that would last over a period of time.

HELMS: When were you selected as administrator of SCS? Who was responsible for that? Benson?

WILLIAMS: I went back as administrator of SCS. That was when the reorganization took place really. The transfer to ACP or the loan to ACP took place in the early months of 1953. Nine months later, in November of 1953, was when the reorganization took place. It was on a Sunday afternoon when Benson called me at home and asked me if I would take over the Soil Conservation Service the next day. I told him only on one condition. That was if he was through reorganizing it and would let me operate it. I was not going to take it with the idea of having it disintegrate further.

HELMS: Did you encounter any difficulties in administering a Service that had been so identified with one man? There were some Federal agencies that one man built up and the people were very loyal to him.

WILLIAMS: No. There were no particular difficulties. There were a few of the old, old timers who had more or less grown up with Bennett who philosophically, I think, resented seeing anybody take his place. But Bennett was never known to be a good administrator. He was a technical man, a professional man and noted worldwide for his capabilities in that regard. I had established something of a reputation of being able to say "yes" or "no" and have some good reasons

for it. I think I was accepted rather universally as the administrator. The name was changed from chief to administrator at that time. I would say there were minimum difficulties of that sort of acceptance. The problems that we had had to do with organizational changes from the regional organization to a state operation. This included the selection of state conservationists to direct the work in each state, the selection of staff members for technical leadership, and the setting up of technical service centers for interstate support. We had our problems, but there was not a refusal to accept me.

HELMS: Do you think that reorganization in the long run helped or hurt the Service?

WILLIAMS: I think the reorganization turned out to be a strengthening of the Service rather than a weakening of it, partly because of the resolve of the employees that SCS was not going to be weakened. And partly because if we were going to a state-by-state basis, our state conservationists could be in daily contact with state-level organizations--state governments--and with the responsibilities that state governments should have and with the state extension service and so on. I think as a result of that our working relations improved. The program of the soil conservation districts benefited.

HELMS: There were other people involved other than Benson in wanting to see that happen, weren't there?

WILLIAMS: Benson left the actual carrying out of it to Assistant Secretary Earl Coke who had been the director of the Extension Service in the state of California before he came to Washington.

HELMS: Did losing the research work in the reorganization hurt the Soil Conservation Service?

WILLIAMS: I think the answer has to be no to that. The fact of that matter is that when soil conservation research work was within the Service, it did not get the financial and administrative support that it needed as compared with the operation work. Therefore, it was not serving the needs of operations as much as it could. When it was transferred to the Agricultural Research Service, it was done with the understanding they would give attention to the needs of research as the Soil Conservation Service presented it to them. It would be a joint review and joint participation. It is my opinion that we got better results from the Agricultural Research Service, who by the way used many former SCS employees in carrying out the research, than we had when it was a part of our own organization. Somebody told me about reorganization that took place in the Forest Service. He said when they made a separate organization of their

research work that "we found out we could work with them." This was sort of what happened in this case!

HELMS: I believe in your time there the land utilization projects were transferred to the Forest Service. Were you responsible for that?

WILLIAMS: I was not responsible for it, but I had a lot to do with helping it being brought about. The decision was made beyond my level and I can not tell you specifically who made it, except of course the Secretary of Agriculture approved of it. It was theoretically sound and I think finally turned out to be sound. The land utilization projects were on land that the government had acquired and owned and, by putting them under a land management agency, the land could be managed in conjunction with other government lands. There is a difference in how the government lands have to be administered as against working with people on private lands. Aside from some program orientation, we had some of the usual problems of getting some of the land shifted over, and personnel difficulties, such as not wanting to leave the Service on the part of some people. Some of those problems were inherent in the process, I guess. I was never really sorry to see the land utilization projects transferred to the Forest Service as a general thing. There might have been land in some of the projects that should not have been in the public ownership in the first place but that is another question.

HELMS: Could you tell us about the conception and enactment of the Small Watershed Program?

WILLIAMS: Based upon the experience that we already had with the eleven authorized projects, which had gone into operation after World War II, it became evident that soil and water conservation could not be carried out just on individual farms. It had to be community action. It had to be on a water management as well as soil management basis. To manage water you have to do it on the basis of hydrologic units. In other words, the area from which the water flows needs to be considered, program-wise, for the kind of actions that need to be taken on the whole watershed. But it was realized that these eleven projects were far too large an area. They were not sufficiently homogeneous in terms of people to produce the right kind of results. It was proposed by certain members of the Congress, particularly on the appropriations committee by Jamie Whitten of Mississippi and H. Carl Anderson of Minnesota, that some small watersheds be established. They added an amount of money--I believe it was $5 million to start it with--for up to fifty small projects not to exceed two hundred and fifty thousand acres in size. It came about through the general basic authority that the Soil Conservation Service had through its original Public Law 46. It could be handled through the appropriation process without being challenged on the floor. The demonstration projects had partially

been set up and theoretically they were to be carried out to prove one way or another whether permanent legislation was needed for a Small Watershed Program for flood prevention and water conservation.

However, before the projects were all selected it became evident to some of the members of Congress and some of our own people in consultation with them that legislation was needed. Mr. Carl Brown, particularly, who passed away many years ago, was a strong leader in the concept of the watershed program. He had been in charge of our sediment control research activities at one time and then our sediment control operational work. He was strongly of the opinion that we needed to approach many of these problems on a small watershed basis rather than on an individual farm basis, which was absolutely right. With some discussions with the members of Congress, as I recall it, Clifford Hope, then the Chairman of the House Agriculture Committee, with the aid of Carl Anderson, Ben Jensen of Iowa, and various other people proposed permanent legislation. They did not want to wait for these demonstration projects set up under the appropriations act to come to a head. A piece of legislation was drafted within the Service at the request of the Congress, which was based upon flood prevention and land treatment and supported by small structures for flood prevention purposes. The original draft did not include such things as water for irrigation, drainage work, municipal supply, or fish and wildlife. Those were subsequently added. This legislation was also introduced in the Senate at about the same time. I do not recall the names of the Senators who took the lead on it but I know there was strong interest in it. The legislation was essentially uncontroversial and was passed by the Congress and signed by the President.

There was opposition to it. The opposition to it came from the Corps of Engineers who were fearful that this would be injurious or interfere with the basic flood control responsibility under the Rivers and Harbors Act which the Corps of Engineers administered. As a result of that opposition, it looked like for a while that the public law which became Public Law 566 might bog down and not pass because of the Corps of Engineers or their lobbyists or people who were interested in their work. So Cliff Hope as the primary legislator of interest went to President Eisenhower and asked him to interject his influence upon the Corps of Engineers. President Eisenhower, to the best of my knowledge, called the chief of the Corps of Engineers and told him to lay off. He wanted this legislation. It was his program and he did not want them to get in the way. Immediately the opposition died down and the law was passed. From then on it was a question of establishing a working relationship with the Corps of Engineers which ultimately worked out quite well.

HELMS: To what extent are you responsible for having SCS work more with suburban and urban clients?

WILLIAMS: I really cannot tell you. I really do not know. It was sort of a combination of recognition by several people. Now, I will say that I did have something to do with it. Way back in the early 1950s--and you can find my original article in *Coronet* magazine--I wrote an article about the disappearance of good agricultural land to nonagricultural uses and the danger of some of our best land getting out of agriculture. This predated by almost thirty, at least twenty-five years, the current concern about the disappearance of our best agricultural land. It is still the same problem. At that time I estimated that there were about a million acres a year of our good agricultural land going into highways and other nonagricultural uses that did not necessarily need to take place. That article had nationwide distribution and had something to do with stirring up interest of other people. There were some broad-minded people in the urban communities here and there around the country, as well as their agriculture leaders such as soil conservation districts, who recognized the interrelationship between some of the urban problems and some of the rural problems. Therefore, in such places as the suburban areas of Chicago we had a growing interest in keeping the land in agriculture, but also recognizing that it had some other uses too, particularly esthetic and recreational uses. From that it grew into a strong feeling that the growing suburbia which was gobbling up so much land around the cities needed to do a better job of planning, or a job of planning where none was being done. There were many people including an architect in the Chicago area, John Quay, who had a very strong interest in this matter, who took the lead in working with the Service and helping bring about the concept. There grew over a period of two or three more years a feeling on the part of many soil conservation district leaders and many urban leaders that something more needed to be done on this regard. We had right here in the Washington, D.C. area, in Fairfax County, for example, some leaders. One was a radio announcer and a chairman of the soil and water conservation district, Stuart Finley, who took strong leadership in wanting to see some planning done in suburbia. Land that was good for various uses would be planned for those uses. This thing evolved gradually over a period of time and I would hate to say that there was any one person that had any overwhelming influence on it.

HELMS: Did gradually working with suburban areas draw a little more support from Congress other than your traditional agricultural allies?

WILLIAMS: That is part of the story. We were able to get the soil conservation districts, the national association, to invite into their annual

meetings and other meetings representatives of urban areas, representatives of recreational interests such as fish and wildlife, and park interests to express their point of view and talk about the value of land use planning for things in addition to agriculture. Then there were some national conferences held on the subject here in Washington which were instigated by the Service and supported by several agencies of the Department of Agriculture and some in the Department of the Interior. It just evolved over a period of time.

HELMS: What prompted you to initiate the national inventory of conservation needs? Has that program accomplished what you wanted it to?

WILLIAMS: It did in that it was the first step. It seemed to me after I had written this article that appeared in *Coronet* and after doing a lot of thinking about this disappearance of land to nonagricultural uses that we really did not know what was going on in terms of volume. My guess of a million acres was just right out of the blue. I had nothing to go on except some very rough calculations. It appeared to me that we could, by going to our field people and in consultation with local interests--not just soil conservation districts but county officials, state officials and others--get a pretty fair idea of what was going on. From that evolved the idea of a sampling process, a statistically sound sampling process, which would actually select on a scientific basis certain areas of land around the country. You could go out there and find out what in fact the land was being used for. This was done and became the general process. We worked with Iowa State University and some of the other universities on this statistical operation. We did get an inventory. It involved a certain amount of facts, a certain amount of conjecture, and a certain amount of estimating, community by community. I think the national summary was indicative of the direction. I think the regional summaries were also indicative. I think at the state level they were more meaningful, but it had the most meaning and the most accuracy at the county level where local people knew more about what was going on. When you start putting the whole thing together on a state and regional and national basis, obviously it became pretty generalized. But it did this: It helped to create a lot of interest. "If this is anywhere near what is going on, well, we had better know a little more about it. We had better be hurrying up the completion of our soil surveys. We had better find out for sure what is going on."

As it happened, my original guess of a million acres of annual disappearance was only exceeded by a quarter of a million acres. I do not remember the exact figure. It seems to me that it was about a million and a quarter acres of disappearance. At the same time, we found out that there was a lot of awful good land in forest use and

rangeland use that could be used for cropland in case of necessity. There were various categories of use and this was estimated on the basis of land use capabilities. As a starting point, I think it was very much worthwhile.

HELMS: Did you try to assess during that whether you were gaining ground or losing ground in getting conservation practices on the land or did you already have a good idea of what was happening in that area?

WILLIAMS: In terms of alerting some people, urban and rural, to the need for land use planning and to the need for conservation not only on a community basis, but on a farm-by-farm basis, I think it was a stimulus. Now I would hate to say how much it brought about but I am sure it did not do any harm. It did some good. How much, I would not want to say. I think it more than paid for itself.

HELMS: Since it has been continued, it has been recognized as being beneficial?

WILLIAMS: Yes. That is right.

HELMS: What were the climatic factors and who were the people involved in getting the Great Plains Conservation Program initiated?

WILLIAMS: (Laughter) I am afraid that you will think I am getting back to saying that I did everything. It so happens that the Great Plains Conservation Program was another program that also came into being during the period of my administration. Of course, my administration extended over a period of sixteen years so there were quite a few things happening. This was an outgrowth of the Dust Bowl days back there in the "dirty thirties." I grew up in that part of the world and I knew it firsthand. A lot of the things had been done. The shelterbelt planting had been carried out largely through Forest Service and the emergency activities. There had been some wind erosion demonstration works set up after the big blow. That was the big blow which triggered the creation of the Soil Conservation Service in 1935. Then World War II came along and the big demand for food and fiber. So the word went out. But the word did not need to go out to plow the land because the price of wheat went up. The farmer went out and found some land to plow up and put into wheat. There was an awful lot of very poor land that was plowed up during World War II and subsequently when the price was still favorable that should have never gone into cultivation. Millions of acres of it. This became very evident when we had some drought years that came along again in a kind of cycle situation after World War II. We had not accomplished the job at all. It was going too slow. It was a community-wide, county-wide, part of a state, part of ten states involved, all the way from Canada to Mexico. There was a lot of discussion on what should be done. I know the state conservationists from those ten

states were heavily involved. I know that they discussed it locally in the states with the governors to try to come up with some ideas for a program.

It is true that I personally took the leadership, again working with Congressman Cliff Hope because he was from Garden City, Kansas, right from the blow area. Some of the other congressmen were from Nebraska. We thought maybe we needed something to focus on this problem area. Even though we had the basic authority under Public Law 46 to do the things that could be done, we did not have the financial resources to focus there and not take something away from the rest of the country. By having special legislation, Congress could appropriate money to that program that would not belong to the rest of the country. It would go to that particular area. With the help of the General Counsel's office in Agriculture and with the sympathy and support of the Secretary of Agriculture, we concocted in 1956 what became known as the Great Plains Conservation Program. Then there was a question of who should administer it. There was not much question in *our* minds who should administer it. We felt it was basically a soil and water conservation program with multiple practices and it ought to be based on sound technology and that the cost sharing features, instead of being like ACP for temporary measures, should be tied to permanent practices. No Great Plains funds should be used for annual practices except on a strictly emergency basis. After the basic legislation was passed by the Congress the program began to take shape with my leadership as administrator and with the staff support of many people, but especially Mr. Cy (Cyril) Luker, who was our first Great Plains Conservation Program leader in the Washington office. He was from New Mexico. It had strong support of the congressmen and senators from those ten states, who were familiar with the problem. It did not have strong support from congressmen from other parts of the country such as Congressman (Jamie) Whitten, who at that time was on the Appropriations Subcommittee and is still on the Appropriations Committee. Since this area did not affect Mississippi, he never took very much personal interest in it. In fact, he kind of felt, I think, that we could do what needed to be done under the general law. But H. Carl Anderson, who was from Minnesota--next door to the area--was interested. He was the minority leader.

We were never able to get the full amount of the appropriations authorized by the Great Plains Act. I believe that was $25 million per year. We did get up to a $10 million level of appropriations. The program details as to just how it would be handled were worked out by staff people in SCS working with the Forest Service and others and with our superior in the Secretary's office, Ervin Peterson. He was very sympathetic to the concept

of the Great Plains Program and to the concept that we had in it of cost sharing for enduring or perma-nent type practices rather than temporary practices. He and I traveled through the Great Plains area with some of the congressional representatives of the area to see for ourselves and for him to learn about the problem. We talked with farmers. We talked with district supervisors. We held meetings. We did a lot of different things. He came back 1,000 percent in support of the Great Plains Conservation Program as did Senator Roman Hruska, who up to that time was just an Omaha lawyer who was not much interested in agriculture of any kind, and especially conservation. He came back saying that this is one thing that he could support. He was a very conservative Republican senator, but here was one thing that he could support.

The Great Plains Conservation Program got underway about the same time that we were getting underway with the Small Watershed Program. There had been a lot of things taking place in the middle 1950s. From about 1954 on up through 1960 a lot of activities supplemental to our basic authority to work with districts were added. In all special programs--the Watershed Program, the Great Plains Conservation Program, and the Resource Conservation and Development Program--we tried to make these supplemental and special purpose to add to the basic authority of the Service. I think by and large that this was reasonably well done, although admittedly we did not bat 100 percent on it by any means. There was some feeling on the part of some soil conservation districts who did not happen to be in the Great Plains area or did not happen to be in an approved watershed that some of the money that should have been coming to their districts was going to somebody else. That was awful hard to prove one way or the other. To the best of our ability, we had a sound basis for the allocation of the funds. The work progressed soundly.

I am satisfied that nearly all the long-term contracts awarded between the government and the farmers, with soil conservation district approval of the conservation program for the farm, were binding contracts. From a financial standpoint the farmer was obligated to carry out a program over a period of time. There was a penalty involved if he were to plow up the land again as was done after World War II. He would have to pay back the money that was given to him for carrying out a conservation practice as well as some other penalties. The Great Plains Conservation Program, after it was observed by farmers living in the area where it was pertinent, became popular. It became especially popular to those farmers who had land that needed to go back into grass or where more shelterbelts were needed. We in the meantime had inherited the shelterbelt program from the Forest Service and we changed the nature of it. Instead of going into wide multi-row shelterbelt planting, we went into

single and double row planting of trees. We did this partly as part of the Great Plains Conservation Program because it was pertinent to that area. Then several million acres of the some fourteen, fifteen million acres of land that should not have been plowed up and needed to go back into grass was reseeded to grass. A sound range management program was designed for those farmers. I think the Great Plains Conservation Program was highly successful.

HELMS: Do you think that we need that sort of program for other areas of the country?

WILLIAMS: I think we have a need for many special areas in the country. I would like to see some kind of program designed specifically for the Palouse country, one of the major erosion control problem areas of the United States. It was proposed several times by the Service and by soil conservation district supervisors living out in that area. Since it primarily affected only Washington, Idaho, and Oregon--mostly Washington and Idaho--it did not get enough support in Congress to push it through. The feeling was that you can take care of that with the regular program. I honestly believe if there had been authority to design a special program for the Palouse area and put the added resources and responsibilities in there that it would have made a difference. Now whether it would have solved the problems or not only time will tell. But the basic facts are that the physical problems of erosion in the Palouse that existed thirty years ago are still there.

HELMS: Would it be wise to have a big general fund applicable for the whole country where you could do contracts with farmers for enduring or permanent measures?

WILLIAMS: If you had that you would in effect have an ACP with a different type of administration. It would have to be an ACP based upon a technical foundation and based upon conservation needs rather than dividing up the money--so much for a congressional district or so much for a county or state. Theoretically having a big pot of money and being able to spot that out on a special basis has some merit. I am afraid the practical problems of political pressure would defeat it. I would be afraid of it.

HELMS: So you think that legislation designating certain areas is probably a wiser way to go?

WILLIAMS: I think if the Congress designates the area and appropriates the money to carry out a program for the area that you have got the soundest basis.

HELMS: SCS people seem to have esprit de corps in carrying out their mission. Has this improved or declined through the years?

WILLIAMS: Yes, Doug, it is true. The Soil Conservation Service employees from day one were highly dedicated to the work that they were to do. They were because they could understand the problem and its significance. They were because they were dealing with solid facts of soils, the water, and the plants. They could see results of their work. It is not like some jobs of being able to talk about it but not seeing anything happen. You could be part of the action of bringing change. It made them interested and developed an esprit de corps personally and then as a unit of organization. I think that it has been a very important part of the Service.

I think there is some degree of slacking off of esprit de corps in the last few years, partly because of overloading of work activities at the local level with decreased support. When you put too much of a workload on a person so that he is unable to do the kind of a job he would like to do and is capable of doing, I think you have to hurt his pride and hurt the esprit de corps. I would say that the basic elements of esprit de corps are still present. There is nothing about the current situation as I understand it that would not be revived again in esprit de corps with resources--wherever they came from. They would not all have to be federal; they could be private or public nonfederal such as county or state. But with resources to do the job, I think you would see again a rebuilding of the esprit de corps that was so strong for so many years. I do believe that during the period of the fifties and sixties when we had the new programs coming into being, new opportunities, and sixteen thousand employees, esprit de corps reached its peak. I was always proud of it. When you get up to around sixteen thousand employees in an organization and you can just about say that every one of them is out there doing a job within their capabilities and opportunities, then you can feel pretty proud of your organization. I always felt that way.

HELMS: SCS seems to place a great deal of emphasis on training, including their own courses and at educational institutions. What is the origin of this emphasis?

WILLIAMS: Doug, I do not know that any one person was the originator of it. We had several staff people in the Soil Conservation Service. Dr. (William R.) Van Dersal, who was one of my assistant administrators, was in charge of our personnel work. And our personnel director, Verna Mohagen, and some of our field people. We recognized that we had to have new employees and most were college graduates that we got from universities. We got them as agronomists or engineers or range managers or foresters or what have you. They were not conservationists. They had to have a rounding out of "how agronomy relates to engineering," and "soil management," and so forth. There was not any other place to do it except in the Service and

this was decided fairly early in the game. I do not know precisely when the first training centers were established, such as the one at Coshocton, Ohio, which was one of the strong ones. Another one was in Athens, Georgia. Another one was in Nebraska. I do not know exactly the date that those were established. They became very necessary. The first step would be to take the new recruits there for general orientation on what the Soil Conservation Service is all about. "What is its basic authority? What is its function? What is its job? Where do the different pieces fall? Do they fit together? What is soil and water conservation? Is it agronomy? Is it soil management? Is it this?" "Yes, it is all these things but it is all of them put together."

At the same time that we were having these orientation classes, we recognized the need for two additional types of training. One was on-the-job training right out in the field where the man was assigned to a field location, where his supervisor or some person assigned to do it would go with him out in the field and hold him by the hand, so to speak, and take him through the process of how to interpret land and the soils, and how to judge land capability. How to recognize when one kind of grass was needed against another kind of grass or when you needed a grass-legume mixture or how to recognize when range grasses need better management. How to recognize when terracing was needed and how to build terraces. How to lay them out and build them. All of these required on-the-job training.

They also took a second type of group training, advanced training in a professional field. At these same training centers where we gave the orientation training, we set up specialized training in the vegetative field for agronomists, as well as range management and forestry. We trained people to adapt their technology to soil and water conservation farming. Also on engineering techniques. I happened to have graduated as a civil engineer. I grew up on a farm so it was a rather easy transition. I understood agriculture from the beginning. But an awful lot of engineers did not have that kind of background. Therefore, they had it to learn. They had to learn that they were not out there just to do engineering, but they were out there to do a kind of engineering which would support a conservation program and would support or make possible a vegetative program, a land treatment program that would put water into the soil instead of leading it off. There was a need for specialized training of a group nature as well as the general orientation. Who started it? I do not know. I know that I gave it all the support I could muster because I recognized that with all the people that we had if they were not trained to do their jobs they could not do them. I did support it very heavily and heartily.

Part Three: June 14, 1981
Alexandria, Virginia

HELMS: Mr. Williams, who conceived of the idea of the multi-county Resource Conservation and Development (RC&D) projects?

WILLIAMS: I can say unequivocally that it was the concept of Secretary Orville Freeman. He had been the governor of Minnesota. I had known him fairly well as governor having worked with him on a number of issues within the state. We had talked about some of the conservation problems in Minnesota that go across county lines and take in a number of jurisdictions. After he became the Secretary of Agriculture, he asked me to stay on as the administrator of the Service. Not long after that he asked me to come over and discuss some program matters with him. He was 100 percent in support of the soil conservation district concept of conservation work. But he felt that the problems did not stop at the county or district lines and that many of them needed to be dealt with on a broader basis. They were not necessarily water conservation or watershed oriented although that might be a factor. He asked me if it was not true that in a number of resource areas the land use--whether it was in forestry or grass or cropland or perhaps recreational uses--had an economic impact and could have more of an economic impact if people would work together on a multi-county and other jurisdictional basis. I had long been convinced that that was true but our appropriations and our directions up to that time had been focused very largely on the soil conservation districts entity approach. Our funds had been appropriated for that purpose. When I agreed that some of these problems could be handled on a multi-county, multi-jurisdictional basis, he said, "Would you be willing to tackle some kind of a demonstration or trial program?" I said, "I guess we would have to do it with the present resources we have because there are not any other financial resources to do it with." He said, "If we could start out two or three of them and get some experience out of it, maybe we can find a way to convince Congress to give us some extra money." I agreed that we would be willing to try on that basis. Then he turned to me and said, "What shall we call this thing?" I said, "Well, we have been talking about resources and conservation and development from a standpoint of labor opportunities and economic opportunities. Really what you are talking about here is the economic side of the results of conservation." He said, "Okay, let us call them RC&D projects." That was how they were named. He and I together did it and that was a start.

Then he told me to go ahead and try to find one that I thought would be manageable in size and that would have some problems. That was how the one in southern Indiana was selected as a trial, the first one. It was

in an area where there were problems of land use from a cropland standpoint. They needed conservation on the land. There were problems of private forestry, of farm forests, and commercial forests. Trees were just standing there with no use and there seemed to be many opportunities in the recreation area. Our state conservationist, Mr. Ed Swain, was able to get the soil conservation district directors of three counties together. After discussions with them and discussions with county officials, they agreed to start a pilot project. So that area was selected. Secretary Freeman made a special trip out there to launch the project. That became one of the best projects we ever had because the entire community, the three-county area, was behind it and they did have plenty of problems to work on. The second one was selected in a quite comparable way. It was in the area north of Pittsburgh, in northwestern Pennsylvania. That was a different set of problems and a different combination of political jurisdictions. But the soil conservation districts, and I think there were three of them there, were quite active in leadership. That was a very, very key point.

HELMS: So after you saw the results of some of this he tried to get the legislation enacted?

WILLIAMS: We had the authority to do what we needed to do under the old basic Public Law 46, but the problem was that the Congress and the administration had interpreted this on an individual soil conservation basis. In order to meet some of the problems, we needed to get authority to do some special work in recreational land use areas. In terms of some amendments, the old Bankhead-Jones Act permitted us to do some work on public lands.

HELMS: What are your thoughts now about the RC&D projects? In retrospect would you have done anything different?

WILLIAMS: I think the concept was absolutely sound. I think the beginnings of it were good. But like so many things it sounded to a lot of people like the salvation of all their problems and they wanted to jump into it too quickly--before they were ready. That was true of some of our own personnel as well as some of the soil conservation districts and non-soil conservation district leaders like city mayors, councils, and college officials who saw an opportunity, or thought they did, to get a hold of some federal money to do some things. They came up with some grandiose ideas and they brought enough pressure to bear to get areas designated that were really not ready for it. They were really too big to be handled in a homogeneous fashion. The Soil Conservation Service was not equipped to handle them. I think that the program began to bog down or became static, so to speak, when it got away from the smaller homogeneous areas where local leadership could get together rather frequently and discuss the